



What public health issues exist concerning the disease?

Epidemiologists with the federal Centers for Disease Control (CDC) have studied CWD and found no link between it and any neurological disease that affects humans. However, based on recommendations from state agencies, it is suggested that hunters follow simple precautions when hunting:

- Wear rubber gloves when field dressing carcasses;
- Bone out meat from the animal;
- Minimize the handling of brain and spinal cord, eyes, spleen, and lymph nodes and avoid consuming these tissues;
- Wash hands and instruments thoroughly after field dressing is completed.

How is CWD transmitted from animal to animal?

The origin and mode of transmission of CWD are unknown. Animals born in captivity and those born in the wild have been affected with the disease. Based on epidemiology of the disease, transmission is thought to be lateral (animal to animal). Indirect contact with the disease agent in a CWD-contaminated environment could also be involved. Transmission by feed is not believed to occur as affected animals have been fed a wide variety of feed.

Is Chronic Wasting Disease related to Mad Cow Disease?

CWD belongs to a family of diseases known as transmissible spongiform encephalopathies (TSEs). In this TSE family there are four predominant variants that affect animals: scrapie in sheep, bovine spongiform encephalopathy in cattle (also known as Mad Cow Disease), transmissible mink encephalopathy, and CWD in deer and elk.

Also within this family are two main variants which affect humans: Creutzfeldt-Jakob disease (CJD), which occurs naturally in about one of every million people; and new variant Creutzfeldt-Jakob disease (vCJD), which has been linked to the outbreak of bovine spongiform encephalopathy in cattle herds in Great Britain. Approximately 133 humans in Europe have died after contracting the new variant Creutzfeldt-Jakob disease.

Can humans contract CWD from deer or elk?

Currently, there is no evidence that CWD is naturally transmissible to humans or to animals other than deer and elk. The CDC states that “although it is generally prudent to avoid consuming food derived from any animal with evidence of CWD, to date, there is no evidence that CWD has been transmitted or can be transmitted to humans under natural conditions. However, there is not yet strong evidence that such transmissions could not occur.

“To further assess the possibility that the CWD agent might occasionally cause disease in humans, additional epidemiologic and laboratory studies could be helpful. Ongoing national surveillance for CJD and other neurological cases will remain important for continuing to assess the risk, if any, of CWD.”

For more information contact:

California Department of Fish and Game
Wildlife Investigations Laboratory
1701 Nimbus Road, Suite D
Rancho Cordova, CA 95670
(916) 358-2790
www.dfg.ca.gov



Facts About Chronic Wasting Disease



California Department of Fish and Game

What is Chronic Wasting Disease?

Chronic Wasting Disease (CWD) is a fatal neurological disease found in wild deer and elk herds in limited areas of eight states in the west and midwest. It has also been found in farmed elk in eight states. CWD was first observed in 1967 in captive deer at a research facility in Colorado. CWD belongs to a family of diseases known as transmissible spongiform encephalopathies (TSEs). The disease damages portions of the brain of infected deer and elk, causing the animals to become emaciated, display abnormal behavior, and eventually die. The agent that causes this disease has not been confirmed, but is widely believed to be an infectious protein called a "prion."



States with CWD diagnosed in farmed and/or wild cervids.

Where is Chronic Wasting Disease found?

CWD has been diagnosed sporadically in wild mule deer, white-tailed deer and elk in north-central and north-eastern Colorado, southeastern Wyoming, western Nebraska, southwestern South Dakota, southwestern Wisconsin, south-central New Mexico north-central Illinois, and eastern Utah. All the state wildlife agencies affected are committed to limiting the distribution of the disease to the current localized areas and decreasing its occurrence in the deer and elk populations.

CWD has been diagnosed in farmed cervids (deer and elk) in Colorado, Kansas, Minnesota, Montana, Nebraska, Oklahoma, South Dakota and Wisconsin.



What symptoms do deer and elk suffering from CWD exhibit?

Most cases of documented CWD have occurred in yearling animals or older. The disease is slowly progressive and always fatal. The most obvious and consistent symptom of CWD is chronic weight loss. Other symptoms include increased drinking and urination, excessive salivation, teeth grinding, and behavioral changes, including listlessness, lowering of the head, blank facial expression, and repetitive walking. CWD-affected animals have ranged in age from 17 months to 15 years of age. The incubation period for CWD is estimated to range from approximately 17 months to 36 months. Duration of illness varies from several days to a year; however, most affected animals succumb to CWD after a 3-4 month illness.

How is Chronic Wasting Disease diagnosed?

Currently, there are no validated live-animal diagnostic tests for CWD. Diagnosis of CWD is based on diagnostic procedures performed after death, including necropsy, histopathology, immuno-histochemistry and ELISA (enzyme linked immunosorbent assay). Gross lesions seen at necropsy which reflect the symptoms of CWD are emaciation and aspiration pneumonia (which may be the actual cause of death). On histopathology, microscopic lesions of CWD in the central nervous system resemble those of other spongiform encephalopathies. Using special diagnostic techniques, immunohistochemistry or ELISA, the laboratory can test retropharyngeal lymph node, tonsil and/or brain tissues for the presence of the prion protein which is present in animals suffering from CWD.

What is the California Department of Fish and Game doing to protect the state's deer and elk herds?

In 1999 the California Department of Fish and Game (DFG) began a CWD surveillance program for wild, free-ranging deer. More than 900 deer have been sampled and tested. All tests have been negative for CWD. The Department has plans to continue the surveillance program indefinitely and will test more than 600 deer and elk this year. California is considered a "low risk" state for CWD because of its long-term ban on the importation of live elk, prohibition on elk farming, and its strict monitoring of live deer importations. All deer importations are closely regulated by the DFG resulting in few deer being imported into the state during the past 20 years.

If I harvest a deer or elk out-of-state, can I bring it into California?

On 4 April 2003, the California Fish and Game Commission adopted a new regulation restricting the importation of hunter-harvested deer or elk. Whole carcasses cannot be transported into the State. The only body parts which are allowed include the following: boned-out meat and commercially processed cuts of meat, portions of meat with no part of the spinal column or head attached, hides with no heads attached, clean skull plates (no meat or tissue attached) with antlers attached, antlers with no meat or tissue attached, finished taxidermy heads, upper canine teeth (buglers, whistlers, ivories). If you will be hunting in a known CWD endemic area, you should have received information at the time you received your hunting tag(s) regarding disposal of the carcass remains and mandatory or voluntary CWD testing.